

--24. A ship having an electrical steering propeller comprising a polyphase electric motor mounted in a housing under the ship's stern via a shaft having upper and lower parts and which is rotated by a drive motor, further comprising a slipping arrangement for supplying electrical drive power, a flat collar bearing for mounting the steering propeller and located proximally to the ship's outer skin, wherein the slipping is located in the upper part of the shaft proximal to the collar bearing and the drive motors are located at least partially in the interior of the collar bearing, thereby achieving a compact installed arrangement of the aforesaid components of the steering propeller.

25. The ship according to claim 24, wherein the electrical steering propeller is mounted below the waterline in the stern of the ship in a gondola-like housing.

26. The ship according to claim 24, wherein the collar bearing is connected to the ship's stern via an intermediate covering.

27. The ship according to claim 26, wherein the intermediate covering has an annular configuration and is connected to the ship's stern via a box structure.

28. The ship according to claim 26, wherein the intermediate covering has an annular configuration and is connected to a double bottom of the ship.

29. The ship according to claim 26, wherein the intermediate covering is located immediately under a lowermost cargo deck in the ship's stern area.

30. The ship according to claim 24, wherein the shaft is mounted under a sealing cover in the ship's stern.

31. The ship as according to claim 30, wherein the sealing cover is a component of a lower most cargo deck in the ship's stern.

32. The ship according to claim 30, wherein the sealing cover has openings to access components of the steering propeller including the slipring, drive motors and other essential elements.

33. The ship according to claim 24, wherein the drive motors are flat radial piston hydraulic motors.


34. The ship according to claim 24, wherein the collar bearing has a toothed rim for the rotary movement on a rotatable ring of the collar bearing, and a stationary ring is connected to a structural part of the ship.

35. The ship according to claim 34, wherein the motors are arranged under the collar bearing in the shaft upper part and held via supports and engaged via pinions in a rotatable ring of the collar bearing.

36. The ship according to claim 33, wherein hydraulic pumps for driving the motors are located in the shaft.

37. The ship according to claim 24, wherein electrical power for the slipring is supplied via a cable which is routed to the slipring arrangement so as to enable the sealing cover to be smooth.

38. The ship according to claim 37, wherein the slipring has a connecting element for connecting the cable.

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39. The ship according to claim 24, wherein the electrical steering propeller further comprises at least one fan located in the upper part of the shaft.
40. The ship according to claim 24, wherein the diameter of the shaft upper part is at least equal to a winding length of the electric motor.
41. The ship according to claim 24, wherein the upper part of the shaft is sealed in a fire-resistant manner from the ship's lower most deck area.
42. The ship according to claim 24, wherein the sliprings supplying power to and monitoring the motor are at least partially in the form of concentric sliprings.
43. A ship according to claim 24, wherein the sliprings are two-phase or three-phase sliprings and further comprising a junction for a motor winding system having more than two or three phases located behind the slipring.
44. The ship according to claim 24, wherein the upper part of the shaft interfaces the lower part of the shaft at approximately the same level as the outer skin of the ship.
45. The ship according to claim 44, wherein the interface between the upper part and the lower part of the shaft is located above the ship's outer skin.
46. The ship according to claim 24, wherein the shaft of the steering propeller is arranged so that the propeller's flow follows approximately the stern profile of the ship.
47. The ship according to claim 24, wherein the flat collar bearing is located above the ship's waterline.

48. The ship according to claim 36, wherein the hydraulic pumps are in the form of power packs.

49. The ship according to claim 43, wherein the junction is made via power semi conductors in the form of a local converted located in the shaft.—

A "Version With Marked Changes Made" is submitted herewith.